Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

1-7. (cancelled)

8. (previously presented) The isolated polynucleotide of claim 73, wherein the polypeptide comprises,

(a) at least one of (i) the sequence PPPGY (SEQ ID NO:1) and (ii) the sequence LPPAY (SEQ ID NO:2) and

(b) at least three domains, each domain comprising the sequence YGXPPXG (SEQ ID NO:3), wherein Y represents a Tyrosine residue, G represents a Glycine residue, L represents a Leucine residue, A represents an Alanine residue, X represents any amino acid residue, and P represents a Proline residue.

9. (previously presented) The isolated polynucleotide of claim 73, wherein the polypeptide comprises the sequence of SEQ ID NO:5, or a conservative variant thereof.

10. (previously presented) The isolated polynucleotide of claim 8, wherein the polynucleotide comprises the sequence of SEQ ID NO:4.

11. (previously presented) A gene comprising the polynucleotide of claim 73.

12. (original) A vector comprising the gene of claim 11.

13. (previously presented) A vector comprising the polynucleotide of claim 73.

14. (original) A host cell comprising the vector of claim 12.

15. (previously presented) A method of producing a polypeptide, the method comprising maintaining the host cell of claim 14 under conditions such that the polypeptide is expressed, then collecting the polypeptide.

16-47. (cancelled)

48. (previously presented) The isolated polynucleotide of claim 73, wherein the polypeptide comprises the sequence of SEQ ID NO:12, or a conservative variant thereof.

49-52. (cancelled)

53. (previously presented) The isolated polynucleotide of claim 73 wherein the polypeptide comprises

(a) the sequence PPXY (SEQ ID NO:8) and

(b) at least three domains, each domain comprising the sequence YGXPPXG (SEQ ID NO:3), wherein Y represents a Tyrosine residue, G represents a Glycine residue, X represents any amino acid residue, and P represents a Proline residue.

54-59. (cancelled)

60. (original) The isolated polynucleotide of claim 8, wherein the polynucleotide is a human or bovine polynucleotide.

61. (currently amendedl) An isolated polynucleotide comprising a sequence that is at least 75% identical to nucleotides 36 to 975 of SEQ ID NO: 4 as determined using BLASTN 2.1.2 matrix; blastn matrix; 1 -3; gap penalties: existence=5, extension=2, wherein a polypeptide encoded by the polynucleotide induces mammalian oocyte activation.

62. (currently amended) An isolated polynucleotide comprising a sequence that is at least 75% identical to nucleotides 1 to 705 of SEQ ID NO: 11 as determined using BLASTN 2.1.2 matrix; blastn matrix; 1 -3; gap penalties: existence=5, extension=2, wherein a polypeptide encoded by the polynucleotide induces mammalian oocyte activation.

63-64. (cancelled)

65. (previously presented) The isolated polynucleotide of claim 8, wherein the polypeptide has a molecular weight of about 32 kDa.

66. (previously presented) The isolated polynucleotide of claim 8, wherein the polypeptide comprises 10 domains, each domain comprising the sequence YGXPPXG (SEQ ID NO:3).

67. (previously presented) The isolated polynucleotide of claim 8, wherein the polypeptide binds to (a) tyrosine kinase c-Yes, (b) a c-Yes adapter protein, or (c) both tyrosine kinase c-Yes and a c-Yes adapter protein, wherein the c-Yes adapter protein binds to tyrosine kinase c-Yes.

68-72. (cancelled)

73. (currently amended) An isolated polynucleotide comprising a sequence selected from the group consisting of:

a sequence as defined in SEQ ID NO: 4,

a sequence as defined in SEQ ID NO:11,

a sequence that hybridizes to the sequence defined in SEQ ID NO:4, ~~and~~

a sequence that hybridizes to the complement of the sequence defined in SEQ ID NO:4,

a sequence that hybridizes to the sequence defined in SEQ ID NO:11, and

a sequence that hybridizes to the complement of the sequence defined in SEQ ID NO:11,

wherein hybridization occurs in 6X SSC at about 45°C followed by one or more washes in 0.2 X SSC, 0.1% SDS at 50°C; and

wherein a polypeptide encoded by the polynucleotide induces mammalian oocyte activation.

74. (previously presented) The isolated polynucleotide of claim 8, wherein the polynucleotide comprises the sequence of SEQ ID NO:11.

75. (new) The isolated polynucleotide of claim 61, wherein the sequence is at least 90% identical to nucleotides 36 to 975 of SEQ ID NO: 4.

76. (new) The isolated polynucleotide of claim 61, wherein the sequence is at least 95% identical to nucleotides 36 to 975 of SEQ ID NO:4.

77. (new) The isolated polynucleotide of claim 62, wherein the sequence is at least 90% identical to nucleotides 1 to 705 of SEQ ID NO: 11.

78. (new) The isolated polynucleotide of claim 62, wherein the sequence is at least 95% identical to nucleotides 1 to 705 of SEQ ID NO: 11.

79. (new) The isolated polynucleotide of claim 73, wherein the polypeptide is at least 75% identical to the polypeptide encoded by SEQ ID NO: 4 or SEQ ID NO:11.

80. (new) The isolated polynucleotide of claim 73, wherein the polypeptide is at least 90% identical to the polypeptide encoded by SEQ ID NO: 4 or SEQ ID NO:11.

81. (new) The isolated polynucleotide of claim 73, wherein the polypeptide is at least 95% identical to the polypeptide encoded by SEQ ID NO: 4 or SEQ ID NO:11.